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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/352,362	07/13/1999	SHUNPEI YAMAZAKI	0756-1996	2149
31780	7590	09/07/2005	EXAMINER	
ERIC ROBINSON			DIAZ, JOSE R	
PMB 955			ART UNIT	
21010 SOUTHBANK ST.			PAPER NUMBER	
POTOMAC FALLS, VA 20165			2815	

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/352,362

Applicant(s)

YAMAZAKI ET AL. 

Examiner

José R. Díaz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 June 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-24, 28, 30-41, 46-115 and 123-176 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 15-24, 28, 30, 31, 34-37, 40, 41, 46-59, 74-115, 123-143 and 158-176 is/are allowed.  
6) ☒ Claim(s) 32, 33, 60, 62, 63, 67, 69 and 70 is/are rejected.  
7) ☒ Claim(s) 38, 39, 61, 64-66, 68, 71-73 and 144-157 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/24/05.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 32-33, 60, 62-63, 67 and 69-70 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 39 and 45 of copending Application No. 09/352,194.

Regarding claim 32, claim 39 of the copending application teaches the limitations of: forming a semiconductor film comprising silicon over a substrate (see line 3 in claim 39 of the copending application); irradiating a laser light to crystallize the semiconductor film (see lines 6-7 in claim 39 of the copending application); etching the crystallized semiconductor film to remove an oxide therefrom (see lines 8-9 in claim 39 of copending application); and heating the crystallized film in a reducing atmosphere to form a flattened (i.e. leveling) surface (see lines 10-12 in claim 39 of the copending application).

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Regarding claim 33, claim 45 of the copending application teaches the limitations of: forming a semiconductor film comprising silicon over a substrate (see line 3 in claim 45 of the copending application); irradiating a laser light to crystallize the semiconductor film (see lines 6-7 in claim 45 of the copending application); treating the crystallized semiconductor film with hydrofluoric acid (see lines 8-9 in claim 45 of copending application); and heating the crystallized film in a reducing atmosphere to form a flattened (i.e. leveling) surface (see lines 10-13 in claim 45 of the copending application).

Regarding claims 60, 62-63, 67 and 69-70, claims 39-40 and 45-46 of the copending application teaches the limitations crystallizing in a atmosphere containing an inert atmosphere (see line 10 in claim 40 and line 11 in claim 46 of the copending application) or containing oxygen (consider lines 11-12 in claim 39 and lines 11-12 in claim 45 of the copending application).

***Allowable Subject Matter***

3. Claims 15-24, 28, 30-31, 34-37, 40-41, 46-59, 74-115, 123-143, and 158-176 are allowed.
4. Claims 38-39, 61, 64-66, 68, 71-73 and 144-157 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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5. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach, disclose, or suggest, either alone or in combination, a method step for flattening asperities comprising the limitation of irradiating a laser light to a crystallized semiconductor film to form asperities in the surface of the crystallized semiconductor film, and flattening the asperities by subsequently heating the crystallized semiconductor film in a reducing atmosphere.

### ***Response to Arguments***

6. Applicant's arguments, filed June 24, 2005, with respect to claims 15-24, 28, 30-31, 34-37, 40-41, 46-59, 74-115, 123-143, and 158-176 have been fully considered and are persuasive. The nonstatutory double patenting rejection of claims 15-24, 28, 30-31, 34-37, 40-41, 46-59, 74-115, 123-143, and 158-176 has been withdrawn.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José R. Díaz whose telephone number is (571) 272-1727. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TOM THOMAS  
SUPERVISORY PATENT EXAMINER

José R. Díaz  
Examiner  
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